

observed. When such cannot be obtained but a positive general and local reaction is present, and every other possible cause for the eye condition is with reasonable certainty excluded, the case may be considered to be of probably tuberculous origin. The treatment should begin with a very small dose, $\frac{1}{1000}$ mgm. and increased to the maximum of toleration; it should never exceed 1 mgm. The duration of treatment must be long continued, even for several years. Tuberculin is of least value in chronic uveitis cases, with the exception of heterochromic cyclitis; it is most satisfactory in scleritis and periphlebitis retinæ. Scleritis, deep and interstitial keratitis and iridocyclitis are closely related to each other and may change from one condition to the other. Exudative choroiditis is seldom of tubercular origin; the teeth are often the source of infection in these cases.

Syphilis and Irregularity of the Pupil.—DUJARDIN and RASQUIN (*Ann. d'ocul.*, February, 1919, p. 89) by the term irregularity of the pupil qualify any angulation of the circumference of the same. Normally the pupil is quite circular or at most slightly oval, with the long axis sensibly vertical. The pupil should be examined for irregularity both by natural and artificial light. As a result of their studies they find that irregularity of the pupil is an extremely frequent symptom in the course of syphilis, especially from the secondary stage onward, and the more frequent with the lapse of time; in fact, such irregularity may be the sole pupillary symptom in advanced syphilis. Irregularity of the pupil is probably syphilitic in 70 per cent. of all such instances, so that every case of "essential" irregularity should be examined serologically and even by lumbar puncture.

PATHOLOGY AND BACTERIOLOGY

UNDER THE CHARGE OF

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The Clinical Value of Complement Fixation in Pulmonary Tuberculosis Based on a Study of 540 Cases.—One of the most difficult problems for the clinician after a diagnosis of tuberculosis has been made is the determination of the presence or absence of activity. The definition of "activity" will always arouse debate and in this case the authors adopted hard and fast rules for the determination of active tuberculosis. The subcutaneous tuberculin test was used for a time as a most reliable diagnostic test for early clinical tuberculosis, but it has since been found not applicable in febrile and hemorrhagic cases, diabetes, nephritis, cardiac involvements and in pregnant women. The complement-fixation test is now being used in many sanatoriums and offers valuable aid to the clinician. BROWN and PETROFF (*Am. Rev. Tuberc.*, 1918, ii, 525) record their experience with the test made

thinks that the value of this finding cannot be fully estimated until a more complete history of the successive localizations of the bacillus has been obtained, but he feels it is safe to assume that this is the earliest stage in which the organism gains by rapid unchecked multiplication a considerable advantage over the host. The local destruction of an epithelial covering by an infectious agent when other miscellaneous infectious agents are absent may or may not be of much importance, for it would depend on the regenerative activity of the epithelium, the tendency to the gathering of injuries transudates and the toxic substances associated with the bacilli. The author found that localizations of *B. abortus* also occur in the walls of the bloodvessels of the chorion. Thus far he has observed only one case of this kind in which the connective-tissue cells of the adventitia of a vessel 0.8 mm. in diameter were completely replaced by clumps of minute bacilli. Since there is usually a slight perivascular infiltration in the diseased placenta this localization may be largely responsible for the circulatory disturbance which lead to the death of the fetus. The case referred to may be but a greatly exaggerated illustration of the action of *B. abortus* in the walls of the bloodvessels where they are too few in number at any one time to be identified.

The Organisms of Secondary Infection, Especially Pneumococci and Streptococci, in Pulmonary Tuberculosis.—COOPEN, DONALD and ANTZ (*Jour. Infect. Dis.*, 1919, xxiv, 498) cultured the blood of 216 cases of pulmonary tuberculosis, of which 36 were far advanced, and found hematogenous infection in 7 of the cases. Four of these, however, were staphylococci, and the authors indicate they were probably skin contaminations. Of the others 1 was *Micrococcus tetragenus*, 1 pneumococcus type II and 1 pneumococcus type IV, with a streptococcus. These results were obtained in broth cultures. All blood cultures in solid media were negative. The case with pneumococcus II was febrile and the case with pneumococcus IV associated with the streptococcus was afebrile. Both of these positive cultures were in far-advanced cases. The occurrence of pneumococci and streptococci in the blood, as found by these authors, is rather low in view of the findings of Pettit and those of Brown, Heise and Petroff. Of 8 cases which died only 1 yielded a positive blood culture postmortem, pneumococcus type II. This case was negative when examined one week before death. The case in which *Micrococcus tetragenus* was found was moderately advanced. Thirty per cent. of the sputa of the 216 cases revealed pathogenic pneumococci and streptococci.

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